

CLAIMS

1. A receiving apparatus, comprising:
 - demodulation means for demodulating a reception signal to a signal on a real axis and a signal on an imaginary axis;
 - 5 C/N ratio calculation means for calculating a C/N ratio with the amplitudes in an amplitude direction of signal points of the demodulation signal demodulated by said demodulation means and a C/N ratio with the amplitudes in a phase direction of the signal points of the demodulation signal demodulated by said demodulation means;
 - 10 phase noise detection means for detecting phase noise on the basis of the C/N ratio calculated with the amplitudes in the amplitude direction and the C/N ratio calculated with the amplitudes in the phase direction; and
 - 15 indication means for indicating the C/N ratios calculated by said C/N ratio calculation means and the phase noise detected by said phase noise detection means.
2. The receiving apparatus as set forth in claim 1,
 - 25 wherein said demodulation means has phase compensation means for compensating a phase with an external compensation signal, and
 - wherein when the phase noise takes place,

said phase compensation means compensates the phase.

3. The receiving apparatus as set forth in claim
1,

5 wherein when the phase noise calculated on
the basis of the C/N ratio calculated with the
amplitudes in the amplitude direction and the C/N ratio
calculated with the amplitudes in the phase direction
is equal to or larger than a predetermine value, said
indication means indicates an alarm.

10 4. The receiving apparatus as set forth in claim
1,

15 wherein said indication means indicates the
phase noise calculated on the basis of the C/N ratio
calculated with the amplitudes in the amplitude
direction and the C/N ratio calculated with the
amplitudes in the phase direction as a numeric value.

5. A C/N ratio indication method for a receiving
apparatus, the method comprising the steps of:

20 demodulating a reception signal to a signal
on a real axis and a signal on an imaginary axis;

25 calculating a C/N ratio with the amplitudes
in an amplitude direction of signal points of the
demodulation signal demodulated by said demodulation
means and a C/N ratio with the amplitudes in a phase
direction of the signal points of the demodulation
signal demodulated by said demodulation means;

determining whether phase noise takes place

on the basis of the C/N ratio calculated with the amplitudes in the amplitude direction and the C/N ratio calculated with the amplitudes in the phase direction; and

5 indicating the C/N ratios calculated by said
C/N ratio calculation means and the phase noise
detected by said phase noise detection means.

6. The C/N ratio indication apparatus for the receiving apparatus as set forth in claim 5,

10 wherein when the phase noise calculated on
the basis of the C/N ratio calculated with the
amplitudes in the amplitude direction and the C/N ratio
calculated with the amplitudes in the phase direction
is equal to or larger than a predetermine value, said
15 indication means indicates an alarm.

7. The C/N ratio indication apparatus for the receiving apparatus as set forth in claim 5,

wherein said indication means indicates the phase noise calculated on the basis of the C/N ratio calculated with the amplitudes in the amplitude direction and the C/N ratio calculated with the amplitudes in the phase direction as a numeric value.